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ABSTRACT

This plan for outcome-based budgeting (OBB) is the result of growing demands for increased fiscal accountability, measurable outcomes, strengthened assessment processes, and more meaningful performance indicators as mandated by many State and Federal legislators. OBB focuses on linking funding with outputs and outcomes. Higher education institutions must redefine budget planning and justification processes and the means of connecting those processes to financial information. OBB tracks student progress from initial matriculation through program completion and identifies significant student outcomes and their basis for funding based on defined student-career development tracks. Critical to OBB is the development of a data base that translates traditional student information into the new, outcome-oriented tracks; it must define and collect new data and establish a structure that uniformly gathers follow-up information on students once they are no longer enrolled in the institution. Building an OBB requires defining the key outcomes; creating the tracking system and maintaining the existing data in parallel; linking inputs, outcomes, and funding; and building budgets based on the outcomes. OBB yields understandable outcomes from State funding for legislators and governors which may help to secure additional funds. OBB is seen as a balanced approach to addressing legislative concerns while expanding the scope of information that institutions use for decision making purposes. (NAV)

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Outcome Based Budgeting: Connecting Budget Development, Allocation and Outcomes

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OUTCOME BASED BUDGETING: CONNECTING BUDGET DEVELOPMENT, ALLOCATION AND OUTCOMES

I. CONCEPT OVERVIEW 1-4

II. MODEL IN BRIEF 4-7

III. BUILDING AN OUTCOME BASED BUDGET

PHASE I

DEFINING KEY OUTCOMES
TABLE A - TRACKING OUTCOMES 8-12

PHASE II

CREATING A TRACKING SYSTEM/
MAINTAINING EXISTING DATA IN PARALLEL 12-13

PHASE III

LINKING INPUTS, OUTCOMES, AND FUNDING 14

PHASE IV

BUILDING BUDGETS BASED ON OUTCOMES
TABLE B - ALLOCATION OF COSTS 15-19

IV. PROBABILITY FOR CHANGE 19

V. STEPS IN IMPLEMENTING OUTCOME BASED BUDGETING 19-20

CONCEPT OVERVIEW

Budgeting methodologies over the years have risen and fallen (and risen again) based on gubernatorial and legislative perception of program and fiscal demands of the time. Formula budgets provide a sense of equity for a system of institutions; program budgeting focuses on specific functions and activities; zero base budgeting suggests a review of need from ground zero; incremental budgeting looks at marginal add-on requirements against a prior years base; while numerous combinations of the various methodologies have been employed.

The recent and growing demands for increased fiscal accountability, measurable outcomes, strengthened assessment processes and meaningful performance indicators all during a decline in the traditional forms of state funding support, create a pressure for a new or revised means of budget development and allocation. It is essential that higher education offer state leaders a vehicle which more clearly connects funding requirements with meaningful outcomes. The reasons legislators use to limit funding must be eliminated or reduced and higher education viewed as a mandate and not simply a discretionary program.

How can higher education achieve a higher order of recognition, particularly during an era of decline in federal support, increasing costs for health care and

prisons, and a public demand for stabilized and or reduced taxes at both the state and federal levels?

Simply, higher education must compete more aggressively in highlighting the cost and benefit of the range of its (higher education) "products" to state and federal political leadership. The key products must be better defined and connected to tangible funding requirements. The most basic and visible place to gain gubernatorial and legislative attention is through the budget processes. A budget structure should be devised that relates key input, output, and outcome measures to funding requirements; a model which translates projected numbers and types of students by discipline and educational objective at the front end of budget development into outcomes. The outcomes would in turn define the "tracks" that students follow from entry into the higher education system through eventual employment, (or if applicable unemployment), job advancement, avocational pursuits, or other gradations of how a higher education is used. The outcomes define the products, which can be included in the everyday language of decisionmaking and become an integral part of budget development.

OUTCOME BASED BUDGETING: RECYCLED FORMULAS?

While outcome base budgeting (O.B.B.) might appear to be more of a current catch phrase than a long-term solution, it is a logical step beyond the existing

budget methods. Higher education does not define adequately its products, or how the products are developed. Are we answering the following questions as a means to understand why students seek a higher education?

- What percentage of students enroll initially to develop a career? Of these how many (percentage) change their objective and why?
- What percentage of students enroll to advance in an existing career path? How many (percentage) achieve their initial objective? How many do not and why?
- What percentage of students enroll without specific career goals?
- What are the most typical educational objectives that are identified at the initial enrollment and how do they change over an educational career? How does the initial enrollment choice (or end major) relate to employment status?
- What percentage of students enroll as full-time students, drop-out and return to finish a program? How many pursued the same objective after dropping-out?
- What differences in objectives exist between part-time and full-time students; or undergraduate and graduate.

Answering these questions begins to clarify the students original intent, provides for a monitoring of change in intent over time, and identifies outcomes of participation in the higher education environment. Information must be structured in such a manner as to limit its complexity, connect it to internal and external

decision making processes and be used to allocate resources based in part, on a new outcome based strategy.

A MODEL FOR BUDGET DEVELOPMENT

An important ingredient in creating an outcome based budgeting process is to focus on linking funding with outputs and outcomes. Traditional budgeting invariably projects funding based on outputs that flow from a set of inputs such as number and type of students, or number of square feet in buildings, or utilizes percentages of a historical base, or indexes to a peer benchmark, or focuses on marginal add-ons connected to a service already provided. In recognition of current concerns for accountability and outcomes, higher education must redefine its budget planning and justification processes and the means of connecting those processes to financial information. The O.B.B. model moves towards addressing these concerns.

An institution would define the following as major "tracks" (i.e. educational objective) through which students can be categorized from point of admission to attainment or non-attainment of their educational objective(s). The tracks are indications of intent and outcome that are understandable and traceable over time.

CATEGORICAL TRACKS/SUBTRACKS / OUTCOMES:

Student Type	Educational Track	Subtrack	A Outcome	B Outcome
Full-time	Career development:	Major/minor		
Full-time	Career advancement:	Major/minor		
Part-time	Career Advancement:	Major/minor		
Part-time	Career Development:	Major/minor		
Part-time	Avocational:	Major/minor		
Part-time	Non-career, non-avocational:	Major/minor		

*At the highest level of aggregation the outcome (A) would indicate whether the student did or did not attain their primary educational objective. Secondary levels (B) would specify other outcomes.

There are subtracks of the above categories that could and should be used depending on the need to specify outcomes at levels that support both internal and external decisionmaking. (There is an important additional subset of student type represented by undergraduate and graduate.)

Tracks and subtracks should be developed that address the fundamental questions/concerns of gubernatorial and legislative leaders. External constituents generally find little meaning in such measures as the number of degrees awarded, student credit hours completed, or student/faculty ratios. The growing demand is to be accountable for what the student derives from the education and the products of the process. The idea is to create a system that leaves no ambiguity regarding the products of higher education. The debate would shift to funding requirements based on students successfully attaining career goals, students achieving some measure of avocational growth, students advancing in their chosen career tracks and students seeking temporary educational "refreshment". Through the revised process the legislature could no longer deny funding due simply to the complexities inherent in formula budget justifications or the mysteries surrounding the relationship of funding inputs leading to student outcomes. O.B.B. would track student progress from initial matriculation through program completion or discontinuation and identify significant student outcomes and their basis for funding. Allocation decisions would be influenced by institutional objectives established around achieving outcome targets.

DATA REQUIREMENTS

A critical phase necessary to support O.B.B. is to build a data base which first translates the traditional student information (i.e. FTE and headcount by level, discipline, full-time/part-time) into the required tracks; second, defines and collects new data; and third establishes a structure that uniformly gathers the key follow-up information on students when they are no longer enrolled in the institution. The follow-up structure must capture sufficient information to reliably be used in substantiating student outcomes.

Educational objectives as categorized through tracks can be analyzed against the traditional instruction and academic support functions, with the primary emphasis on relating the outcomes with functional historical expenditures. The projection of future funding can be built on a base of known outcomes (derived from the tracks) and projected changes in the types and numbers of important variables. Present student data bases and budgets should be maintained as a parallel vehicle to judge the reasonableness of the new methodology. Additionally, other support costs could be linked to the new tracks much in the same manner as present support formulas relate to the instruction function or could be built on separate sets of outcomes.

BUILDING AN OUTCOME BASED BUDGET

PHASE I - DEFINING KEY OUTCOMES

The first phase of O.B.B. is defining the key outcomes that will drive funding requirements. (Existing input/output data should not be abandoned and will be important for comparative purposes.)

The definitions should be derived from discussions that are attentive to both internal and external decisionmaking. Many outcomes will be as important to institutional administrators as they are to external constituents. Ideally, those outcomes that are desired by the Governor's Office or the Legislature will be negotiated to insure agreement. The importance of outcomes to external bodies should not be lost to internal decision makers as they assess what will best justify their funding requirements. While there are obvious differences in the type of decisions made depending on the level of organization, the more aware administrators are of legislators feelings, the better prepared they are in building budget requests that capture the external dimension.

In a practical sense, institutions must be willing to take the "Student" in its most basic forms and reconstruct outcomes around sets of definitions that tie to common understandings of what students achieve or gain as a consequence of their

educational experience. What do students gain or "become" as a result of their higher education experience that can be the basis for budget building? The following represent broad categorical tracks:

- Career Development (New Career Objective)
- Career Advancement (Present Career)
- Avocational Advancement
- Non-Career, Non-Avocational

The categories are concrete tracks that students can be assigned when they enroll and followed throughout their educational careers. The primary connection is between the track and the outcome(s), the students "use" or application of their educational experience.

A student who enrolls in a bachelor's in accounting, completes the degree and is employed in the accounting profession offers a link between education and outcome. A student who enrolls in physical education, completes the degree and is employed as an auto parts salesman presents a less clear link between education and outcome. A student who enrolls in civil engineering, does not complete degree requirements and is employed as a landscape architect also presents a fuzzy connection to the benefit (and cost) of the partial education. On a second level if a student enrolls in a masters in educational leadership while employed as a secondary teacher, and is promoted to an assistant principal upon completion of the masters offers a high correlation between education and career advancement.

There are many combinations of educational attainment and outcome that must be explored. The greater the number of combinations defined, the greater the ability to make judgments of future occurrence and increased ability to assign cost. Table A presents additional information covering the educational track/subtrack-to-outcome relationship. Column A represents the students self-identified track and subtrack; Column B reflects outcomes; and Column C identifies the relationship of the educational objective to the outcome. The aggregation of variations in objective to outcome may highlight trends that should be considered when evaluating program growth, cost, and general usefulness to students. It should be noted that in cases where there is no clear match there is still value to the student and state in offering instructional programs.

The sensitivity of the tracking process can be enhanced by reducing the students educational objective down to the lowest point possible. The student declaration of a major represents a primary factor for tracking during and following enrollment. It would be as important for outcome determination to seek information from all students, full and part-time that clarified their intended use of the higher education experience. If at all possible there should be as limited guesswork as possible in judging student intent.

TABLE A

TRACKING OUTCOMES

A SELF-IDENTIFY EDUCATIONAL TRACK	B OUTCOME	C OBJECTIVE TO OUTCOME
CAREER DEVELOPMENT		
ENGINEER	ENGINEER	MATCH
ARCHITECT	LIBRARIAN	------
TEACHER	REAL ESTATE	------
CAREER ADVANCEMENT		
ENGINEER	ENGINEER	MATCH
LAWYER	HIGHER ED. ADMINISTRATOR	MATCH
DOCTOR	DOCTOR	MATCH
AVOCATIONAL		
ACCOUNTING	TAX RETURNS	MATCH
ASTRONOMY	COMPUTER PROGRAMMER	------
MUSIC	LABORER	------
NON-CAREER/ NON-AVOCATIONAL		
ART	UNKNOWN	------
MUSIC	UNKNOWN	------
NO OBJECTIVE	POKER DEALER	------

Key variables include the following:

1) Student Status - Full or Part-Time

2) Student Level - Undergraduate or Graduate

3) Student Objectives: Career Development, Career Advancement, Avocational, Non-Career/Non-Avocational

4) Major/Minor

5) Employment Status

With a tracking system in place the final element is identifying what happened to the student during and following enrollment and to make connections to one or more outcomes.

PHASE II - CREATING A TRACKING SYSTEM

The establishment of a comprehensive data system to capture and categorize student intention, student progress, and eventual post-educational experience requires a new approach to data definition, collection, and connection to funding.

Conventional data on graduates is used primarily to cultivate graduate involvement in institutional activities and fund-raising. There is increasing interest based on demands for accountability to further understand how graduates have fared in the job market. The general direction of external constituents (i.e. Legislature/

Governor's Office) is to clarify in more detail the relationship of student education to post educational outcome all linked to cost (particularly state share).

The institutional data system must capture the key variables identified under Phase I of categorical track, student status, student level, major, minor, educational objectives, employment status and do so over many years during and after matriculation. The knowledge of when a student stopped or dropped-out and why, may be as important as follow-up on students who completed programs.

PHASE II - MAINTAINING EXISTING DATA IN PARALLEL

As mentioned previously, the conventional input/output data should not be discarded. It is important, if for no other reason, to establish a basic crosswalk between the traditional data and the new outcome measures. It is inevitable that the acceptance of new measures will, for a period of time, depend on how well they can be assessed relative to existing standards.

The most basic data element of any model must be the student. The tracking of student by level, full-time/part-time, and discipline/major are ongoing requirements. The present deficiency in our methodologies is the inability to translate these categories into a more meaningful end product.

As suggested in Phase I higher education can redefine and clarify its primary products or outcomes. It is crucial in the process of redefinition to have reference points between the old data system and the new tracks.

PHASE III- LINKING OUTPUTS, OUTCOMES, AND FUNDING

Much of the discussion to this point has centered on the need to revise information systems to collect and categorize data in a way that portrays students in a very different light. As a consequence the basis for using outcomes as a means to make decisions is evolving. The most useful check will be a comparison to known input/output data.

HOW CAN WE CONNECT A BUDGET REQUEST TO OUTCOMES? First, a budget based on outcomes should connect with the existing financial structure. The categorization of expenditures by function and sub-functions offers the best starting point. There must be the translation of expenditures to outcome(s) similar to formula development. O.B.B. represents the use of a different set of variables (or outcomes) but connected formulaically to functional costs. Like any formula the use of an actual expenditure base gives an indication of a cost-to-outcome relationship but does not necessarily reflect what is required to perform at a desired level.

The creation of a new system will take time to define, build, test, and revise. The success of the process will be its utility in supporting how decisions are made internally and how those decisions are received by external constituents.

PHASE IV- BUILDING BUDGETS BASED ON OUTCOMES

As suggested in Phase III the movement toward building O.B.B. will require patience and a willingness to change. The challenge occurs at two levels. First, the acceptance of the concept that outcomes become the focus for budget building and allocation. Second, the necessity to realign data systems to define, capture, and report on a very different set of variables.

To adequately implement O.B.B., institutions must first examine their own environments and gauge the willingness of the internal and external constituents to participate in a major overhaul of planning/budgeting/data processes. Presently there is a great deal of pressure to find better ways to make budget decisions and as a consequence, there is some receptivity to change. Each state is at a different point in cycles of political and economic stress, and because of that it is likely that solutions will be patterned to address individual state conditions. The national call for accountability and use of outcomes will be interpreted differently by each state.

In an ideal world O.B.B. begins in the earliest stages of an institutions planning process. Outcomes agreeable to both internal and external constituencies are important for decision making and should be the basis for data building.

The projected outcomes would be placed into discrete categories (i.e. tracks and subtracks) for definition, and systematic collection and analysis. The categories linked to instruction would in aggregate be compared to instructional costs. As in the case of traditional formulas, institutions would be developing funding requirements based on the cost-to-outcome relationship. As an example, if 75% of the students enrolled are full-time students and 75% of these students are in a career development track and the remaining 25% are part-time, all enrolled in the career development track, then a simple cost-relationship could be developed between the direct costs of instruction and the percentage of all students (75%) seeking a new career path. That concept can be reduced to a more finite analysis by connecting groupings of specific career objectives (i.e. business major) to costs by subfunction. Table B offers a simple example of how costs can be allocated by educational track and subtrack.

The usefulness of O.B.B. becomes apparent when the outcomes realized during and following matriculation are looped back into the budget development and allocation processes. If 75% of students are enrolled in a career development

TABLE B

ALLOCATION OF COST BY TRACK/EDUCATIONAL OBJECTIVE

EDUCATIONAL TRACK	% FTE	INSTRUCTION COST
CAREER DEVELOPMENT	50%	$ 50 mil.
CAREER ADVANCEMENT	40%	40 mil.
AVOCATIONAL	5%	5 mil.
NON-CAREER/NON-AVOCATIONAL	5%	5 mil.
	100%	$100 mil.
CAREER DEVELOPMENT (MAJOR)		
BUSINESS	20%	$ 10 mil.
LIBERAL ARTS	60%	30 mil.
ENGINEERING	10%	5 mil.
OTHER	10%	5 mil.
	100%	$ 50 mil.
CAREER ADVANCEMENT (MAJOR)		
BUSINESS	25%	$ 10 mil.
LIBERAL ARTS	50%	20 mil.
ENGINEERING	10%	4 mil.
OTHER	15%	6 mil.
	100%	$ 40 mil.

17

track what percentage actually end in their field of educational choice? That is, what is the relationship of outcome to their educational objective? There are obviously a number of variables that influence one's opportunity to gain a desired career objective. Those variables should be understood as much as possible. If institutions know that X% of students change their educational objective during matriculation, or that only X% attain their educational objective following matriculation, or that X% will return to seek support for career advancement programs, or that X% will shift from a liberal arts track to business track during matriculation; then their approach to decision-making may change.

Information can be fed back into the planning phase to fine-tune program offerings and highlight the general costs of various levels of outcome(s). As budgets are built on historical costs associated with the tracks and subtracks, standards for comparison can then be developed.

O.B.B. clarifies to legislators and governors understandable outcomes connected with state funding. There may not be agreement on all objectives or progress toward each objective, but there would be less ignorance regarding students use of education. A downside to focusing on outcomes, from a broad perspective, is that it may be easier to attack without the complexity of formula variables confusing the debate. Unfortunately the attack on higher education funding has been continuous

for a number of years and different strategies for budget justification and allocation are essential.

IV.- PROBABILITY FOR CHANGE

All of the signals for higher education nationally indicate changes in the availability of funding and the accountability for the diminishing share of state and federal support. Each state will react somewhat differently to change, but the effects will be felt by all. O.B.B. is not presented as THE solution in securing additional state funds. The use of outcomes is seen as a balanced approach in addressing gubernatorial and legislative concern while expanding the scope of information used by institutions for decision making purposes.

V. STEPS IN IMPLEMENTING OUTCOME BASED BUDGETING

1. Reach agreement in the earliest phases of planning on desired outcomes with internal and external constituents.

2. Develop a data system that uniformly defines, collects and analyzes data based on desired categories, tracks, subtracks and outcomes.

3. Develop a budget request that estimates the projected outcomes: First 2-3 years will represent a transition using both existing methods and O.B.B..

4. Model cost relationships using tracks/subtracks/outcomes against actual expenditures: build a new frame of reference in assessing and justifying financial need.

5. Utilize the outcomes and related costs with both internal and external constituents.

6. Seek to expand the number of subtracks and outcomes in creating a more "sensitive" relationship to cost.